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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/705,852  | 11/13/2003  | Don Odell            | ASC-21              | 4893             |
| <div>28230      7590      03/16/2006</div> <div>H JAY SPIEGEL<br/>P.O. BOX 444<br/>MOUNT VERNON, VA 22121</div> |             |                      |                     |                  |
| <div>EXAMINER</div> <div>RATCLIFFE, LUKE D</div>  |             |                      |                     |                  |
| <div>ART UNIT      PAPER NUMBER</div> <div>3662</div>   |             |                      |                     |                  |
| DATE MAILED: 03/16/2006   |             |                      |                     |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                                   |  |
|------------------------------|--------------------------------------|-----------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/705,852 | <b>Applicant(s)</b><br>ODELL, DON |  |
|                              | <b>Examiner</b><br>Luke D. Ratcliffe | <b>Art Unit</b><br>3662           |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 07 November 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-6, 12-16, 21 and 22 is/are rejected.
- 7) ☐ Claim(s) 7-11 and 17-20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 13 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The applicant claims a "one-dimensional light detector" however the applicant discloses that the light detector is an array of light detectors. An array is inherently in two dimensions as well as the applicants light detector. If the applicant intends this claim to read that the array is a single column but extends to multiple rows or is a single row that extends to multiple columns then this needs to be clarified.

All claims depending upon claim 1 are hereby rejected as well because they include all the limitations of claim 1.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4, 5, 6, 12, 13, 16, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Ogawa (5502568).

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Referring to claim 1 Ogawa shows a sensor for determining the angular position of a radiating point with a point source (figure 10 Ref 55), multiple arrays of light detectors that stretch in one dimension (figure 10 Ref 53), a two dimensional mask (figure 10 Ref 52), and the light detector detects the angle between the source and detector (column 2 line 20-35).

Referring to claim 4 Ogawa shows a digital or discretely varying pseudo-random transmissivity component (figure 11 and figure 12).

Referring to claim 5 Ogawa shows a pattern of V-shapes (figure 11).

Referring to claim 6 Ogawa shows a pattern of V-shapes that at least some of them overlap each other (figure 11).

Referring to claim 13 Ogawa shows a detector comprising of a charged coupled device (column 4 line 25-56).

Referring to claim 12 Ogawa shows a mask that is rectangular (figure 10).

Referring to claim 16 Ogawa shows a sensor for determining the angular position of a radiating point with a point source (figure 10 Ref 55), a light detector (figure 10 Ref 53), a two dimensional mask with a pseudo-random surface pattern with overlapping V-shapes (figure 10 Ref 52), and the light detector detects the angle between the source and detector (column 2 line 20-35).

Referring to claim 21 Ogawa shows a detector comprising of a charged coupled device (column 4 line 25-56).

***Claim Rejections - 35 USC § 103***

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ellis (4092072) in view of Ogawa (5502568).

Ellis shows a sensor for determining the angular position of a radiating point with a point source (figure 1 Ref 41), an arrays of light detectors that stretch in one dimension (figure 1 Ref 35), and a mask that light from the source travels through onto the detector (figure 1). Ellis does show a two dimensional mask but the mask is not a pseudo-random surface pattern.

Ogawa does show a two-dimensional mask interposed between a detector and a point light source that includes a two dimensional pseudo-random surface pattern defining a prescribed degree of transmissivity (figure 10 Ref 53).

It would have been obvious to modify Ellis to include the two-dimensional mask taught by Ogawa so more information on the angular position of the light source could be imparted onto the detector therefor allowing the position to be more effectively determined.

Claims 2, 3, 14, 15, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa in view of Ellis (4092072).

Referring to claim 2 Ellis shows a analog or continuously varying pseudo-random sequence of V-shapes (figure 1). It would have been obvious to modify Ogawa to

include the analog or continuously varying pseudo-random sequence of V-shapes because the employment of this type of signal is easily done with a CCD device

Referring to claim 3 Ellis shows an analog or continuously varying pseudo-random transmissivity component (figure 1). It would have been obvious to modify Ogawa to include the analog or continuously varying pseudo-random sequence of V-shapes because the employment of this type of signal is easily done with a CCD.

Referring to claim 14 Ogawa as modified shows a charged coupled device (CCD) (column 4 line 25-56). It would have been obvious to modify Ogawa to include a charged coupled device because this is a common method for sensing light.

Referring to claim 15 Ellis shows a mask that extends laterally of the detector (figure 1). It would have been obvious to modify Ogawa to include a mask that extends laterally over the detector because it blocks any unwanted light that would otherwise get to the sensor.

Referring to claim 22 Ellis shows a mask that extends laterally of the detector (figure 1). It would have been obvious to modify Ogawa to have the mask extend laterally of the detector because it will block the light that is not suppose to reach the detector and allow the light that is suppose to pass through.

### ***Allowable Subject Matter***

Claims 7-11 and 17-20 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luke D. Ratcliffe whose telephone number is 571-272-3110. The examiner can normally be reached on 8:00-4:30 M-F.

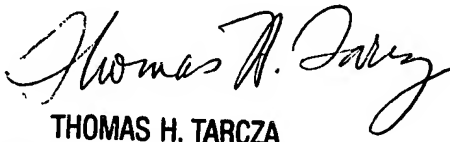
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on 571-272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LDR

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